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THE CORRELATION OF DRAWING AND MANUAL TRAINING.

THE subject of my paper today—the correlation of drawing and manual training—is not a new one. There has been for some time a desire on the part of our best supervisors of both branches for a closer affiliation and a more hearty co-operation; and already in the work of some of the larger cities the influence of one upon the other is strongly felt. But the last word has by no means been said. In some of the other cities and in places where the work is new, drawing and manual training have each their isolated place in the school curriculum; and too often the teacher of drawing undervalues the work of the manual-training teacher, while the manual-training teacher has a little secret contempt for the drawing teacher's talk about "art," "art feeling," and the like. That this is not the ideal condition I am sure we all agree, and the purpose of the paper and the discussion afterward is to see what we can do to better conditions and to find out why drawing and manual training—two members of the same family, sisters in fact—cannot be on terms of greater intimacy, more mutually helpful. As manual training is the younger and perhaps not quite so well known member, I would call your attention to a few points concerning its history, its present aspect, and its relation to drawing.

The growth of manual training has been from two distinct sources, representing opposite extremes of thought. It has grown, on the one side, from the technical school, and, on the other, from the kindergarten. The manual training of the technical school is purely utilitarian, while that springing from the kindergarten came purely as an educational idea. In the union of these two growths we have manual training in its present-day aspect—not, on the one hand, entirely technical and utilitarian, nor, on the other, as distinctly educational as it will be when it is more permeated with the spirit of the kindergarten, and when the

methods of such pioneer workers as Dr. Runkle, Dr. Woodward, and Dr. Belfield join hands with the thought of such thinkers as Dr. Dewey, C. Hanford Henderson, Stanley Hall, and others.

The high schools were the first public schools to introduce manual training, and they followed the methods used in the technical schools. The object was to provide for the high-school boy a more useful and lucrative occupation than that of clerk or bookkeeper, which were about the only fields open to the average high-school graduate. From the high school manual training gradually pushed its way down into the grades, borrowing in too many instances the high-school method of class instruction and the making of exercises.

From the opposite extreme, the kindergarten, very much and very important manual training has been taught, although not technically considered as such. The activities of the kindergarten—or the “manual training of the kindergarten,” as it might be called—is entirely lacking in a commercial or utilitarian idea, and is solely for the development of the child; so much kindergarten work is ideal manual training, as clay-modeling, free paper-cutting, paper-folding, mat-weaving, etc.

This kindergarten manual training has been of infinitely greater educational value than the more technical kind which found its way from the technical schools to the high school. Of all forms of educational manual training the most valuable, it seems to me, is the work in clay-modeling. Work in no other medium supplies such perfect training for the senses of sight and touch, and develops such a conception of proportion, form, and beauty of line. If I could employ but one medium in my teaching, I would certainly choose this one. Free paper-cutting is a fascinating form of manual training, and when colored paper is used, the delight of the little workers is proof of its value. The more exact forms of this elementary manual training are paper-folding and cardboard construction. I believe in mechanical accuracy in its proper place, but I do believe there is a more important accuracy to be striven for in the first four grades of school work—viz., free-hand accuracy. I wonder why so many

teachers consider it necessary to make working drawings with ruler and compass in order to make them accurate, when a training of the eye and a study of proportion might be accomplished at the same time.

If I were called upon to give my opinion as to which class of teachers has done the more for manual training, I should have a difficult question to decide, for the service of the drawing teachers in the cause of manual training has been great. They have commenced at the right end, and their teaching has had a truly educational motive—the development of the senses of sight and touch; while the manual-training teachers have not always kept the educational motive in mind, and have concerned themselves too largely with merely technical skill. Each class of teachers, however, has been enthusiastic and has done much to bring about the condition of things which we have at present. Certainly this condition is hopeful, and the future points to better and still better things, as our work becomes known throughout the length and breadth of the land. But the end to which we are looking cannot be gained unless we look at our work in the broader sense, realize that we teachers of drawing and manual training are working for one great end, the educational development of the child, and join our forces that we may work hand in hand. I have letters from a number of men well known in educational work, touching this matter of a union of drawing and manual training, and what they say will have such force with you that I take the liberty of reading extracts from their letters.

Dr. Haney, superintendent of manual training and drawing of New York city, says:

Much of the teaching of design can best be taught in its direct application, as applied pattern or as structural design, to things to be made. Much of the talk of teachers of drawing about art is loose. With a definite end for the teaching of the laws of beauty, such teaching becomes concrete, not abstract. Beauty in common things, concrete things, can best be taught by the making of such things. The points then come home to the child.

Mr Upton, supervisor of manual training, Buffalo, writes:

Our educational processes will never produce their fullest results till the lines between subjects are broken down. Art without expression which

hand-work affords is superficial, and hand-work without the spirit of beauty will always be mere work, nothing higher. Artists have been mostly paper and paint artists, and manual-training teachers are sticking too closely to what they have been taught. Both are now reaching out into the field of the other, and good must come from these investigations.

From C. Hanford Henderson, a man who has written much of value on educational topics, comes this:

The two branches are and ought to be very closely related, and the teachers of them could gain much, I think, by coming into neighborly touch. This alone would be sufficient reason for such a union, but there seems to me other arguments as well. Both drawing and manual training are now highly developed specialties, and the tendency of every specialty is to produce a certain apartness which neither the specialist nor his subject can well afford. We need to be brought into closer touch with other related effort to escape the danger of getting things a little out of proportion. It seems to me, too, that such a union movement would accomplish an increased amount of good without a corresponding increase in the machinery of organization.

The president of the Milwaukee Normals has this to say:

Drawing can never accomplish its largest good divorced from constructive work, and it is certainly true that constructive work is of little value without drawing. The teachers of these branches should know each other and each other's work.

From the supervisor of manual training, Boston, we have this word:

We have just begun the practical correlation of drawing and manual training, in which both departments join.

Superintendent Balliet writes:

It will be very valuable to have a joint meeting of the drawing and manual-training teachers. I should go farther and say there ought to be a meeting of these teachers, the teachers of music, and the teachers of literature, to discuss in the broadest way the problem of art education. To have drawing teachers assume that art education is merely drawing is to narrow the subject in a most unfortunate way.

You will be interested in the thoughts of one of the pioneers of art education, Mr. John S. Clark:

I beg to say that I am decidedly in favor of uniting the forces of the art and manual-training teachers. In the art movement that is to come, great attention is to be paid to the subjects of design, through putting the work of design on principles rather than upon mere caprice or whim, and the

execution of design according to principle is going to call for a good deal of manual training, while the study of the application of design to use and material is going to be a great help for manual training.

These are only a few of the many letters received expressing an interest in the matter.

As a rule, criticism is merited, and when the feeling becomes general that there is something wrong with art education and manual training, it is not wise for the teachers of these subjects to disregard these signs.

A few years ago a good drawing supervisor was teaching clay-modeling, free paper-cutting, and paper-folding, using colored paper in teaching design, and was doing something in cardboard construction by using pattern sheets, and was making use of the geometrical solids; all of which was good drawing and excellent manual training. This practical and very important side of art education has been almost dropped. Twelve years ago, at the first meeting of the Iowa State Drawing Teachers' Association, there were excellent exhibits of clay-modeling. We look in vain for such exhibits now from the public schools. Free paper-cutting and colored-paper work have given place to brush work. Pattern work has been almost entirely dropped, while thousands of dollars worth of geometric solids are covered with the dust of five or six years. In place of this we have a great deal of nature-drawing in the lower grades with water color, and ink and brush, story-telling with the brush and colored crayon, pose-drawing, etc. The same sort of work is carried on through the grades: landscape from the imagination, pose-drawing with the brush, design in water color, object drawing "in mass," dark-and-light effects after the Japanese, etc.; all of which is excellent, and has come to save the work from the hard, inartistic, and conventional sort of way into which it was in danger of going. But is not the pendulum in danger of swinging a little too far in that direction? The drawing teachers, in their anxiety to make the results artistic, to have "free work" and not to cramp their pupils, often sacrifice truth, especially in much of the nature work seen. As the pupils approach the eighth grade, much of

the nature work should be done with the pencil point, and time should not be lost by making the lessons too elaborate. The pupils should give more time for study and comparison, with opportunities to try again.

The drawing teacher who is so permeated with the art idea that she has not time to teach clay-modeling, free paper-cutting, cardboard construction work, and the legitimate use of the geometrical solids in teaching the pupils how to see and study, is doing a great deal toward meriting such accusations as Dr. Haney's: "Much of the talk about art is loose."

Please do not misunderstand what I have said about drawing, for I thoroughly believe that the subject is being better taught every year; but I feel that very important forms of drawing have been disregarded in recent years.

Manual training has been making great strides during the last ten years, although there are many false methods of teaching yet to be rectified, such as beginning the work in the high school, and basing the method of teaching on that of the technical schools, employing artisans as instructors instead of trained teachers, and trying to make manual training an end in itself instead of a means to an end.

I asked the assistant superintendent of the London School Board Manual Training Department what in his judgment was the most important thing in manual training, and he answered: "Tool manipulation." The London course of study shows the same answer. The London boy certainly does know how to use his tools, but Mr. Barter's teachers are giving the same exercises and models that were in use ten years ago. His teachers are almost all artisans, with very meager conception of the educational value of their teaching, and, as far as I could see, manual training was an end in itself.

A number of our high schools have similar courses. "Tool manipulation" is the watchword. A set of graded exercises is worked out by each pupil, followed by completed models, or these models are made, alternating with the exercises. There is no beauty in the lap joint, or in fact in any of these exercises, and

it is not surprising to find the models in such a course as devoid of beauty as the exercises with which they alternate. In most cases every line and angle can be tested with the rule and triangle, and the series may justly be called a carpenter's course. Need I say that right here is a field for the drawing supervisor?

In strong contrast to this, and directly opposite to it in method, is the Swedish sloyd. This handicraft was practiced for three hundred years in the Scandinavian countries before Dr. Salomon adapted it to the needs of the schools of Sweden. In its original purity it possessed high educational merits, for the articles made were designed by the maker, and were for use and ornament in the home, and not for sale. Dr. Salomon's adaptation has preserved this educational feature in theory, if not in actual practice, as the sloyd course is based on a series of exercises which are taught while the pupils are making useful models. These models may be as varied as the minds of the workers, and a hundred different localities might all be teaching sloyd without duplicating a single model, while a single teacher may have a group of a dozen models for each exercise, and, better still, the pupil may design a new model if he can make it simple enough. Here is another large field for the drawing teacher—constructive design.

In the course at Oshkosh each pupil designs a model to take the place of some model in the course four times each year; and at all times he is at liberty to design his own model, should he so desire.

It is this sloyd which has appeared in the United States to fulfil a mission, and to take up and apply in the grades the educative principles of self-activity which are the spirit of the kindergarten. The influence of sloyd is entirely changing the methods of teaching in such schools as Pratt Institute and Teachers College, and there is growing up an American educational manual training to take the place of the old methods. This is a combination of the spirit of the kindergarten with the methods of sloyd, in addition to a third element, which is purely American, and comes to us from the colleges, and from the investigations of

such men as John Dewey, of Chicago. Through this third element manual training will eventually relate itself to everything in the school curriculum; but it must first relate itself to drawing, or "art;" for it still lacks much of the spirit of beauty. Especially in the field of invention and design our present manual training shows its weak point. A pupil cannot design a good model without knowing the difference between good and bad constructive design, and when the manual-training teacher cannot tell the difference, we have a deplorable state of affairs. When we go one step farther into the field of ornamentation, we enter the slough of despond—a poorly designed model is mutilated by a hideous reproduction of Pharaoh's horses, or a Rebecca at the well, burned in an atrocious manner; and this sort of work the manual-training teacher calls "pyrography." Poor Pharaoh's horses could not be a more pitiful sight had they been literally driven through fire. We need the aid of the drawing teachers to help us to see what good constructive design is, and when this will be enhanced by simple, tasteful decoration; and the drawing teachers need our help in order to have something of this kind to design and decorate.

Says Henry T. Bailey:

There is no room in the elementary schools for both drawing and manual specialists. Teachers of manual arts in the lower schools will ultimately become teachers of manual arts specializing as artists in the high schools, or teachers of manual arts specializing as craftsmen in the high schools. Teachers of tools and teachers of theories are equally undesirable. Teachers who can use tools well, but without taste, and teachers of taste who can do nothing themselves, are blind teachers of the blind.

Dr. William T. Harris says:

I am heartily in sympathy with the ideas expressed in the circular. The getting up of traveling exhibits and sending them from place to place is a piece of missionary work which will bring forth good fruit. But the best idea yet suggested is the union of the manual-training and drawing departments. Manual training has, I think, suffered somewhat since its first beginnings from a separation of its courses of study from the fine arts. Ornamental products always take the market away from the merely useful products that neglect ornament.

In connection with manual training, art should be taught in such a way that every pupil will learn something regarding the principles of good taste

in the arrangement of his materials and in the form and efficiency of his work.

It would double the value of manual training if pains were taken in this matter of good taste as to form and arrangement. I therefore wish you success in the proposed movement.

Mr. Richards, of Teachers College, adds:

Among all the possible correlations of school studies none is so natural and essential as that between construction work and art in structure.

Colonel Parker said:

These two lines of work are essentially one. Teachers have made a separation between them; they are one to the child. . . . We manual-training workers have been thinking of ourselves as outside the field of art, but, as a matter of fact, we are constantly exerting an influence, good or bad, whether we will or no.

Every constructive project is a concrete example of form, proportion, and color of a positive character. Such work may become, in my judgment, the most powerful æsthetic influence within the possibilities of the school, and the realization of this possibility at the present time, it seems to me, means the co-operation between the drawing and manual-training teachers of the kind suggested for the new association.

In closing, let me repeat and emphasize Mr. Bailey's thought:

There is no room in our elementary schools for both drawing and manual-training specialists. Teachers of tools and teachers of theories are equally undesirable. Teachers who can use tools well, but without taste, and teachers of taste who can do nothing themselves, are blind teachers of the blind.

There is one solution for this problem: Drawing supervisors who neither understand how to teach the use of tools, nor how to use them, should attend summer manual-training schools until they acquire this knowledge; and manual-training teachers should study drawing in the same way. All of our large cities and normal schools follow the example of New York and place drawing and manual training under one supervision. This means that the supervisor must know drawing and manual training equally well. It would be unfortunate for a school to have a supervisor who would disregard the claims of either subject. It would be possible for such schools as Teachers College, Pratt Institute, and the Art Institute of Chicago, by making their course three instead of two years, to graduate teachers who could supervise both branches.

L. D. SUMMERS.